

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (currently amended): A method for producing a transgenic cotton plant comprising the steps of:

- (a) obtaining cotton petiole explants,
- (b) exposing the petiole explants to a culture of *Agrobacterium tumefaciens* that harbors a vector comprising an exogenous gene and a selectable marker gene, the *Agrobacterium* being capable of effecting the stable transfer of the exogenous gene and selectable marker gene to the genome of the cells of the petiole explant,
- (c) culturing the petiole explants in medium containing one or more plant hormones to induce callus formation, wherein the one or more plant hormones is 2,4-dichlorophenoxyacetic acid at a concentration up to about 0.5 mg/l and kinetin at a concentration up to about 1 mg/l,
- (d) selecting a transformed callus that expresses the exogenous gene,
- (e) culturing the selected callus in suspension culture for a duration of less than about 20 days to induce formation of embryogenic calli,
- (f) culturing the embryogenic calli to induce formation of embryoids, and
- (g) germinating an embryoid to obtain a young transgenic cotton plant.

Claim 2 (previously presented): The method of claim 1, wherein the petiole explants are pre-cultured for a period of time prior to exposure to the culture of *Agrobacterium tumefaciens*.

Claim 3 (previously presented): The method of claim 1, wherein the culture media used in steps (b)-(g) have glucose as the sole carbon source.

Claim 4 (previously presented): The method of claim 3, wherein the glucose is at a concentration of about 10 g/l to about 50 g/l.

Claim 5 (previously presented): The method of claim 4, wherein the glucose is at a concentration of about 30 g/l.

Claim 6 (previously presented): The method of claim 1, wherein the culture media used in steps (b) and (d)-(g) do not contain hormones.

Claim 7 (previously presented): The method of claim 1, wherein embryoid germination of step (g) is carried out in a medium having a source of nitrogen selected from the group consisting of asparagine, glutamine or both asparagine and glutamine.

Claim 8 (previously presented): The method of claim 7, wherein the source of nitrogen is at a concentration of about 700 mg/l to about 5 g/l.

Claim 9 (previously presented): The method of claim 7, wherein the medium further contains KNO_3 as a source of nitrogen at a concentration of about 3.8 g/l.

Claim 10 (previously presented): The method of claim 7, wherein the source of nitrogen is both asparagine and glutamine, and the asparagine is at a concentration of about 200 mg/l to about 1 g/l and the glutamine is at a concentration of about 500 mg/l to about 2 g/l.

Claim 11 (previously presented): The method of claim 10, wherein the asparagine is at a concentration of about 500 mg/l and the glutamine is at a concentration of about 1 g/l.

Claim 12 (canceled).

Claim 13 (currently amended): The method of claim ~~12~~ 1, wherein the suspension culture of step (c) has a duration of about 10 days to about 20 days.

Claim 14 (previously presented): The method of claim 13, wherein the suspension culture of step (c) has a duration of about 14 days.

Claims 15-17 (canceled).

Claim 18 (previously presented): The method of claim 1, wherein the 2,4-dichlorophenoxyacetic acid is at a concentration of about 0.05 mg/l and the kinetin is at a concentration of about 0.1 mg/l.

Claim 19 (currently amended): A method for producing a transgenic cotton plant comprising the steps of:

- (a) obtaining tender petiole explants from cotton plants,
- (b) exposing the petiole explants to a culture of *Agrobacterium tumefaciens* that harbors a vector comprising an exogenous gene and a selectable marker gene, the *Agrobacterium* being capable of effecting the stable transfer of the exogenous gene and selectable marker gene to the genome of the cells of the petiole explant,
- (c) culturing the petiole explants to induce callus formation in medium containing about 0.05 mg/l 2, 4-dichlorophenoxyacetic acid and about 0.1 mg/l kinetin,
- (d) selecting a transformed callus that expresses the exogenous gene,
- (e) culturing the selected callus in suspension culture containing no added plant hormones to induce formation of embryogenic calli,
- (f) culturing the embryogenic calli to induce formation of embryoids, and
- (g) germinating an embryoid to obtain a young transgenic cotton plant on a medium containing KNO₃ at a concentration of 3.8 ~~mg/l~~ g/l.

Claim 20 (previously presented): The method of claim 1 which further comprises:

(h) growing the young transgenic cotton plant to produce a transgenic cotton plant capable of growth in soil.

Claim 21 (previously presented): The method of claim 20, wherein the young plants are grown on a medium containing glucose and sucrose as the carbon source.

Claim 22 (previously presented): The method of claim 21, wherein the medium contains about 10 g/l of each of the glucose and the sucrose.

Claim 23 (previously presented): The method of claim 19 which further comprises:

(h) growing the young transgenic cotton plant to produce a transgenic cotton plant capable of growth in soil.

Claim 24 (previously presented): The method of claim 23, wherein the young plants are grown on a medium containing glucose and sucrose as the carbon source.

Claim 25 (previously presented): The method of claim 24, wherein the medium contains about 10 g/l of each of the glucose and the sucrose.

Claim 26 (previously presented): The method of claim 19, wherein the embryoid germination medium contains a further source of nitrogen selected from the group consisting of asparagine, glutamine or both asparagine and glutamine.

Claim 27 (previously presented): The method of claim 26, wherein the asparagine is at a concentration of about 500 mg/l and the glutamine is at a concentration of about 1 g/l.

Application Serial No. 10/009,590
Amendment dated 10 December 2007
Reply to Office Action dated 27 August 2007

Claim 28 (previously presented): The method of claim 19, wherein the suspension culture of step (c) has a duration of less than about 20 days.

Claim 29 (previously presented): The method of claim 28, wherein the suspension culture of step (c) has a duration of about 10 days to about 20 days.

Claim 30 (previously presented): The method of claim 28, wherein the suspension culture of step (c) has a duration of about 14 days.